PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Group Art Unit:	3662
Examiner:	Fred H. Mull
Title:	POSITIONING SYSTEM
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AMENDMENT – FOR DISCUSSION PURPOSES ONLY

25. A positioning system for determining a position of a positioning terminal, the system including a plurality of first signal sources each emitting a respective first signal, and one or more second signal sources each emitting a respective second signal, the first signals being synchronous with a reference time and the second signals being non-synchronous with the first signals, for, based on a signal propagation time and signal propagation speed of the first signals, determining a distance from the positioning terminal, said positioning system comprising:

a measurement device for receiving the first signals from the first signal sources to determine a position P of the measurement device and a time of measurement when the measurement device receives the first signals and for, based on the time of measurement, measuring a receiving time (TR), based on the reference time, of a predetermined event of the second signals;

a control device for determining a signal propagation time (t) between the measurement device and one of the second signal sources by calculating a relative distance |P-Q| between the measurement device and the one second signal source based on the position P measured by the measurement device and a position Q of the one second signal source and by dividing the resulting distance by the signal propagation speed, and determining a time (TT), based on the reference time, at which the one second signal source originates the predetermined event by solving TR-t;

the positioning terminal having a receiving device for receiving the signals from the first and second signal sources; and

a communication device for communicating between the control device and the positioning terminal,

wherein the positioning terminal uses the time TT to limit a search for ~~as a reference to receive~~ the signals from the first signal sources, and uses the signals from the first signal sources for determining the position~~ing~~ of the positioning terminal.